USFS KALISPELL POINT BOAT AREA (PWS #1090160)
SOURCE WATER ASSESSMENT REPORT

September 5, 2002

State of Idaho
Department of Environmental Quality

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality (DEQ) is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source, and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Kalispell Point Boat Area (PWS #1090160),* located along the shores of Priest Lake, Idaho, describes the public drinking water system, the associated potential contaminant sources located within a 1,000 foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should <u>not</u> be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

The Kalispell Point Boat Area drinking water system consists of one well, designated Well #1. Drilling of the well was completed in November of 1991 at a depth of 100'. The well uses a 6-inch casing. The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWSs) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works (1997)* states that 6-inch steel casing requires a thickness of 0.280 inches. The Kalispell Boat Area casing is 0.250 inches thick and therefore does not meet today's IDWR's standards. At the time of the 1999 sanitary survey, the wellhead and surface seal had been maintained and the well is located outside the 100-year floodplain and is protected from surface runoff. The well received a moderate system construction score.

The well was assigned a moderate hydrologic sensitivity score. The well is relatively shallow, but located in an area of poorly drained soils that provide some protection against the vertical transport of contaminants.

The well received low potential contaminant/land use scores in all chemical categories with the exception of the microbial category. The well was assigned a high score for potential sources of microbial contamination. There are five known potential contaminant sites located within the well's source water assessment area. Information regarding the potential contaminants within the 1,000-foot boundary have been summarized and included in Table 1.

Table 1.

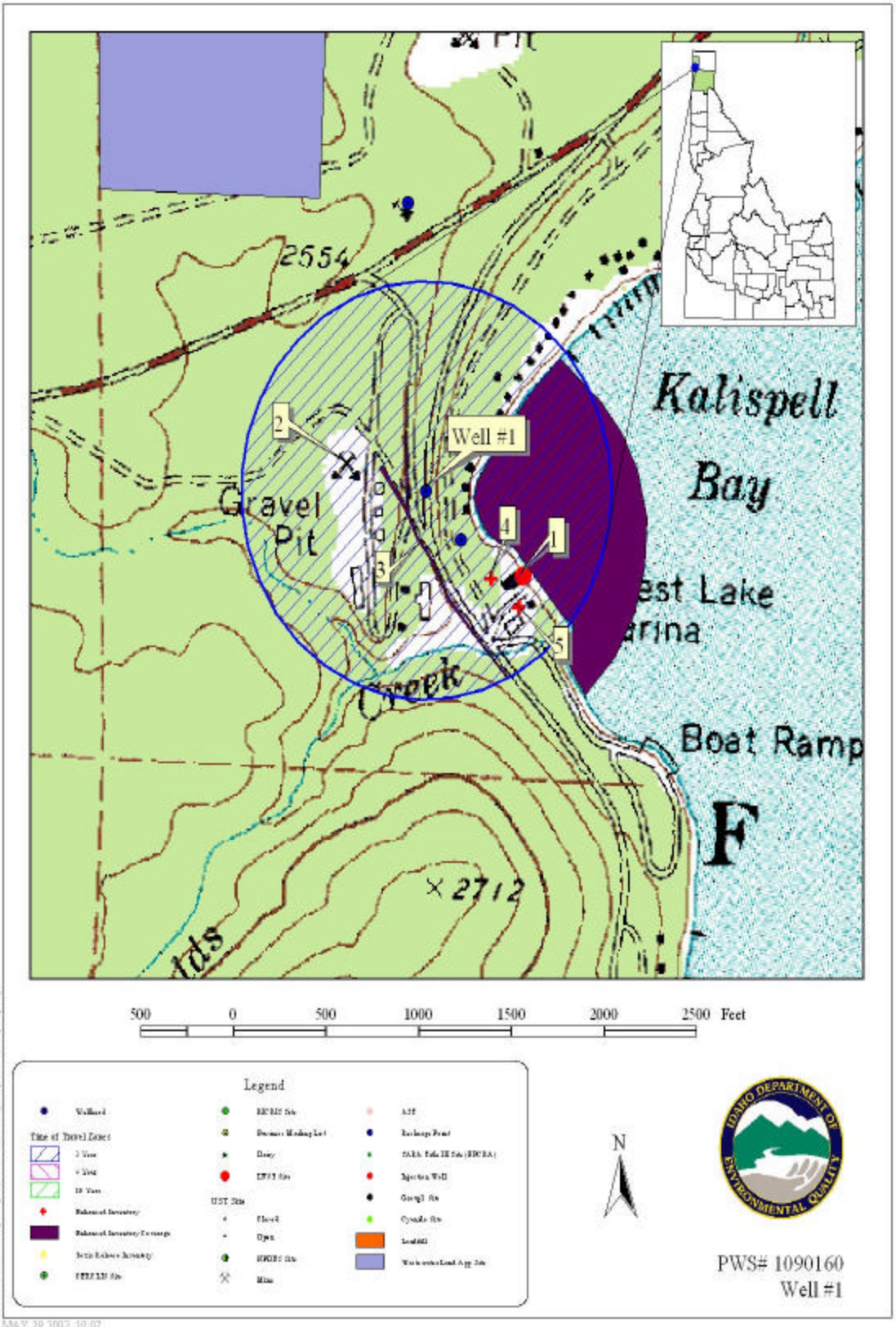
SITE #	Source Description	Source of Information	Potential Contaminants[1]
1	Marina	Database Search	VOC, SOC
2	Gravel Pit	Database Search	VOC, SOC
3	Pressurized Sewer Line	Enhanced Inventory	IOC, Microbial
4	Septic Tank	Enhanced Inventory	IOC, Microbial
5	Septic Tank	Enhanced Inventory	IOC, Microbial

[1]IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Kalispell Point Boat Area water system samples for total coliform monthly when the boat area is open and has an excellent sampling history. Nitrate is monitored annually and nitrite is monitored every nine years. Both measure well below the maximum contaminant level of 10mg/L.

The well received an overall susceptibility ranking of moderate in all chemical categories. A copy of the susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary.

Figure 1. USFS Kalispell Point Boat Area Delineation Map and Potential Contaminant Source Locations



This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Kalispell Point Boat Area should focus drinking water protection activities on implementation of practices aimed at maintaining current water quality. The water system should develop a drinking water protection plan that addresses public education, management of potential contaminant sites, and contingency components. Local residents should be made aware of the location of the well and the location of the well's source water assessment areas. They should be advised of methods for the proper disposal of household hazardous wastes in these areas and of septic system maintenance procedures. Potential contaminant sites should operate using best management practices to decrease the possibility of contamination. The water system should draw up a contingency plan that outlines emergency response activities and identifies an alternative source of water should one become necessary. The water system may want to establish a dialogue with the state and local agencies related to developing their plan. Drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing drinking water protection (formerly wellhead protection) strategies please contact Shantel Aparicio at the Coeur d'Alene regional IDEQ office at (208) 769-1422 or Melinda Harper of Idaho Rural Water Association at 1-800-962-3257.

Attachment A

USFS Kalispell Point Boat Area
Susceptibility Analysis
Worksheet

Ground Water Susceptibility Report Public Water System Name : USFS KALISPELL POINT BOAT AREA Well# : WELL #1

Public Water System Number 1090160 12/6/2002 10:59:01 AM

1. System Construction		SCORE				
Drill Date	11/5/1991					
Driller Log Available	YES					
Sanitary Survey (if yes, indicate date of last survey)	YES	1999				
Well meets IDWR construction standards	NO	1				
Wellhead and surface seal maintained	YES	0				
Casing and annular seal extend to low permeability unit	NO	2				
Highest production 100 feet below static water level	NO	1				
Well located outside the 100 year flood plain	YES	0				
Total System Construction Score		4				
2. Hydrologic Sensitivity						
Soils are poorly to moderately drained	YES	0				
Vadose zone composed of gravel, fractured rock or unknown	YES	1				
Depth to first water > 300 feet	NO	1				
Aquitard present with > 50 feet cumulative thickness	NO	2				
Total Hydrologic Score		4				
3. Potential Contaminant / Land Use - ZONE 1A			IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT		0	0	0	0
Farm chemical use high	NO		0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO		NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A			0	0	0	0
Potential Contaminant / Land Use - ZONE 1B						
Contaminant sources present (Number of Sources)	YES		3	2	2	3
(Score = # Sources X 2) 8 Points Maximum			6	4	4	6
Sources of Class II or III leachable contaminants or	YES		3	2	2	
4 Points Maximum			3	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO		0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land		0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B			9	6	6	6
Cumulative Potential Contaminant / Land Use Score			9	6	6	6
4. Final Susceptibility Source Score			10	10	10	10
5. Final Well Ranking			Moderate	Moderate	Moderate	Moderate

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Highest production 100 feet below static water level	NO	1
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	Total System Construction Score	4

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Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
	Total Hydrologic Score	4

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	3	2	2	3
(Score = # Sources X 2) 8 Points Maximum		6	4	4	6
Sources of Class II or III leachable contaminants or	YES	3	2	2	
4 Points Maximum		3	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		9	6	6	6
Cumulative Potential Contaminant / Land Use Score		9	6	6	6
4. Final Susceptibility Source Score		10	10	10	10
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

> 13 = High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund≅ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (IDEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by IDEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.